

IN THE CLAIMS:

1 1. (Currently Amended) A method for proxying data access commands from a first stor-
2 age system to a second storage system in a storage system cluster, ~~the method comprising~~
3 ~~the steps of:~~

4 in response to a failure in communication between a client and the second storage
5 system, receiving, at a proxy port on the first storage system, a data access command at
6 the first storage system that is directed to the second storage system;

7 forwarding the received data access command to the second storage system via a
8 cluster interconnect;

9 processing the data access command at the second storage system;

10 returning a response from the second storage system to the first storage system via
11 the cluster interconnect; and

12 sending a response to the data access command to ~~a~~the client from the first stor-
13 age system.

1 2. (Currently Amended) The method of claim 1 wherein the storage systems are storage
2 appliances ~~and wherein the data access command is received at a proxy port associated~~
3 ~~with the first storage appliance.~~

1 3. (Original) The method of claim 2 wherein the proxy port comprises a physical port.

1 4. (Original) The method of claim 2 wherein the proxy port comprises a virtual port as-
2 sociated with a physical port.

1 5. (Original) The method of claim 1 wherein the response comprises requested read
2 data.

- 1 6. (Original) The method of claim 1 wherein the response comprises an acknowledge-
2 ment of a write operation.
- 1 7. (Original) The method of claim 1 wherein the response comprises a predetermined set
2 of read data.
- 1 8. (Original) The method of claim 1 wherein the cluster interconnect comprises a direct
2 link between the first storage system and the second storage system.
- 1 9.-16. (Cancelled)
- 1 17. (Currently Amended) A method for proxying data access commands in a first stor-
2 age system to a second system in a storage system cluster, ~~the method comprising the~~
3 ~~steps of:~~
4 in response to a failure in communication between a client and the second storage
5 system, receiving, at a proxy port on the first storage system, a data access command at
6 the first storage system that is directed to the second storage system;
7 analyzing a received data access command at the first storage system;
8 forwarding the received data access command to the second storage system; and
9 processing the received data access command at the second storage system.
- 1 18. (Currently Amended) The method of claim 17 further comprising ~~the steps of:~~
2 returning a response from the second storage system to the first storage system;
3 and
4 sending a response to the data access command to the client from the first storage
5 system.

- 1 19. (Currently Amended) The method of claim 17 wherein the step of forwarding fur-
2 | ther comprises ~~the step of forwarding~~ the data access command to the second storage sys-
3 | tem via a cluster interconnect.
- 1 20. (Original) The method of claim 19 wherein the cluster interconnect comprises a fi-
2 | bre channel link.
- 1 21. (Original) The method of claim 19 wherein the cluster interconnect comprises a di-
2 | rect link between the first storage system and the second storage system.
- 1 22. (Cancelled)
- 1 | 23. (Currently Amended) The method of claim ~~22-17~~ wherein the proxy port comprises
2 | a physical port.
- 1 | 24. (Currently Amended) The method of claim ~~22-17~~ wherein the proxy port comprises
2 | a virtual port associated with the physical port.
- 1 25. (Original) The method of claim 18 wherein the response comprises requested read
2 | data.
- 1 26. (Original) The method of claim 18 wherein the response comprises an acknowl-
2 | edgement of the write operation.
- 1 | 27. (Currently Amended) A computer readable ~~medium~~ media, including program in-
2 | structions executing on a computer, for proxying data access commands from a first stor-
3 | age system to a second storage system in a storage system cluster, the computer readable
4 | ~~medium~~ media including instructions for performing the steps of:

5 | in response to a failure in communication between a client and the second storage
6 | system, receiving, at a proxy port on the first storage system, a data access command at
7 | the first storage system that is directed to the second storage system;
8 | forwarding the received data access command to the second storage system via a
9 | cluster interconnect;
10 | processing the data access command at the second storage system;
11 | returning a response from the second storage system to the first storage system via
12 | the cluster interconnect; and
13 | sending a response to the data access command to ~~a~~the client from the first stor-
14 | age system.

1 | 28. (Currently Amended) A system for proxying data access commands from a first
2 | storage system to a second storage system connected via a cluster interconnect, the sys-
3 | tem comprising:

4 | in response to a failure in communication between a client and the second storage
5 | system, means for receiving a data access command at the first storage system that is di-
6 | rected to the second storage system;
7 | means for forwarding the received data access command to the second storage
8 | system via a cluster interconnect;
9 | means for processing the data access command at the second storage system;
10 | means for returning a response from the second storage system to the first storage
11 | system via the cluster interconnect; and
12 | means for sending a response to the data access command to ~~a~~the client from the
13 | first storage system.

1 | 29. (Currently Amended) The ~~method-system~~ of claim 28 wherein storage systems are
2 | storage appliances and the data access command is received at a proxy port associated
3 | with the first storage appliance.

1 | 30. (Currently Amended) The ~~method-system~~ of claim 29 wherein the proxy port com-
2 | prises a physical port.

1 | 31. (Currently Amended) The ~~method-system~~ of claim 29 wherein the proxy port com-
2 | prises a virtual port associated with a physical port.

1 | 32. (Currently Amended) The ~~method-system~~ of claim 28 wherein the response com-
2 | prises requested read data.

1 | 33. (Currently Amended) The ~~method-system~~ of claim 28 wherein the response com-
2 | prises an acknowledgement of a write operation.

1 | 34. (Currently Amended) The ~~method-system~~ of claim 28 wherein the response com-
2 | prises a predetermined set of read data.

1 | 35. (Currently Amended) A method for proxying data access commands from a first
2 | storage system to a second storage system in a storage system cluster, the method com-
3 | prising:

4 | in response to a failure in communication between a client and the second storage
5 | system, receiving a data access command at the first storage system that is directed to the
6 | second storage system;

7 | forwarding a data access command from the first storage system to the second
8 | storage system;

9 | processing the data access command at the second storage system; and

10 | returning a response from the second storage system to the first storage system.

1 | 36. (Previously Presented) The method of claim 35 further comprises sending a re-
2 | sponse to the data access command from the first storage system.

1 37. (Previously Presented) The method of claim 35 wherein the data access command is
2 forwarded via a cluster interconnect.

1 38. (Previously Presented) The method of claim 35 further comprises receiving by the
2 first storage system the data access command that is directed to the second storage sys-
3 tem.

1 39. (Previously Presented) The method of claim 35 further comprises returning the re-
2 sponse from the first storage system to a client.

1 40. (Previously Presented) The method of claim 39 wherein the response is returned via
2 the cluster interconnect.

Please add claims 41 *et al.*

- 1 41. (New) A method for proxying data access commands from a first storage system to a
2 second storage system in a storage system cluster, comprising:
3 receiving a data access command at the first storage system;
4 determining the data access command was received at a proxy port on the first
5 storage system;
6 passing the data access command to a local virtual adapter;
7 forwarding the received data access command to the second storage system via a
8 cluster interconnect;
9 processing the data access command at the second storage system;
10 returning a response from the second storage system to the first storage system via
11 the cluster interconnect; and
12 sending a response to the data access command to a client from the first storage
13 system.
- 1 42. (New) The method of claim 41, wherein the data access command is directed to the
2 second storage system.
- 1 43. (New) The method of claim 41, wherein the proxy port comprises a physical port.
- 1 44. (New) The method of claim 41, wherein the proxy port comprises a virtual port.
- 1 45. (New) The method of claim 41, wherein the first storage system receives the data ac-
2 cess command in response to a communication failure between the client and the second
3 storage system.
- 1 46. (New) A system for proxying data access commands from a first storage system to a
2 second storage system in a storage system cluster, comprising:

3 a proxy port on the first storage system, the proxy port to receive a data access
4 command that is directed to the second storage system in response to a failure in commu-
5 nication between a client and the second storage system;

6 a local virtual adapter on the first storage system, the local virtual adapter to for-
7 ward the received data access command to the second storage system via a cluster inter-
8 connect;

9 a processor on the second storage system, the processor configured to process the
10 data access command at the second storage system;

11 a partner virtual adapter on the second storage system, the partner virtual adapter
12 to return a response from the second storage system to the first storage system via the
13 cluster interconnect; and

14 a network adapter to send a response to the data access command to a client from
15 the first storage system.

1 47. (New) The system of claim 46, wherein the first storage system further comprises a
2 local virtual target module to determine the data access command was received at a proxy
3 port on the first storage system, and the local virtual target module to pass the data access
4 command to the local virtual adapter.

1 48. (New) The system of claim 46, wherein the proxy port comprises a physical port.

1 49. (New) The system of claim 46, wherein the proxy port comprises a virtual port.